

Ofek and Kobayashi cannot render the claims obvious, as the combination is still missing at least one feature in each of Applicants' independent claims. Thus, it is respectfully asserted that no *prima facie* case of obviousness has been established for any of Applicants' claims, which are all believed to be in condition for allowance.

A. Claims 1-6

Claim 1 recites a computer system comprising a plurality of backup storage systems. The computer system includes at least first and second backup storage systems to each back up information stored on at least one client. The computer system also includes at least one user interface coupled to at least the first and second backup storage systems to receive information related to backup activities of the first and second backup storage systems.

Both Ofek and Kobayashi fail to disclose or suggest at least one user interface coupled to first and second backup storage systems to receive information related to backup activities of the first and second backup storage systems. Since the combination of Ofek and Kobayashi fails to disclose or suggest at least this feature of claim 1, claim 1 is patentable over the combination.

1. Ofek

In contrast with claim 1, Ofek (which is commonly assigned with the present application) describes (with reference to Figs. 11A, 11B and 27) a storage management application (SMAPP) that coordinates a backup of data from a primary storage element to **only a single** secondary or backup storage element associated with a tape library. Thus, Ofek fails to disclose or suggest at least first and second backup storage systems, as recited in claim 1.

More specifically, at col. 18, line 52 *et seq.*, Ofek discloses that the SMAPP begins a backup session by instructing the primary storage element to establish a virtual circuit with the secondary storage element. Commands that identify the logical object to be backed up are then issued to the primary storage element, and to the secondary storage element to mount the appropriate tapes in the tape library on which the identified logical object is to be backed up. The SMAPP then issues commands to execute the backup.

The Office Action contends that Ofek allegedly discloses "one user interface" at col. 18, lines 36-38, wherein Ofek states "the primary storage element includes an SMAPP interface

116a. Similarly, the second storage element includes an SMAPP interface 116b." Applicants respectfully point out that Ofek's SMAPP interfaces 116a and 116b are not user interfaces to receive information related to backup activities as recited in claim 1, but rather system interfaces used to establish a virtual circuit between the primary storage element and the secondary storage element. Specifically, nowhere does Ofek disclose or suggest that the SMAPP receives any information related to backup activities of any backup storage system. Rather, the SMAPP is a program that merely establishes a connection and sends instructions to both primary and secondary storage systems. Thus, Ofek does not disclose a user interface that receives information related to backup activities of first and second backup storage systems, as recited in claim 1.

In connection with the user interface recited in claim 1, the Office Action also references Ofek's Figure 27, element 271g, which Ofek discusses in col. 35, lines 26-44. In this passage, Ofek discloses that a control station 271g of the secondary or backup storage node 271 may include a keyboard and screen for local operation, and that control station 271g may manipulate and control the robotics of a tape library unit. Ofek does not disclose or suggest, however, that the control station 271g receives any information related to backup activities of any backup storage system. Thus, this portion of Ofek also fails to disclose or suggest the user interface feature recited in claim 1.

2. Kobayashi

Like Ofek, Kobayashi fails to disclose both the first and second backup storage systems and user interface features recited in claim 1. Instead, Kobayashi is directed to a switching control method for providing backup *processing* capacity (as opposed to *storage* capacity) to one or more computers for fault tolerance or fail over purposes. In col. 1, lines 60-64, Kobayashi describes a system which includes an operating processor and a backup processor, as well as synchronizing means and failure information storing means on each, to provide backup processing capabilities. However, at no point does Kobayashi discuss storage systems or a user interface, let alone a computer system which comprises first and second backup *storage* systems, and a user interface coupled to the first and second backup storage systems to receive information related to their backup activities. Thus, like Ofek, Kobayashi does not disclose or

suggest the computer system of claim 1; more specifically, Kobayashi does not appear to disclose *any* of the features recited in claim 1.

In view of the foregoing, the combination of Ofek and Kobayashi fails to disclose or suggest at least one feature recited in claim 1. Accordingly, claim 1 patentably distinguishes over the combination of these references and is in condition for allowance. Therefore, the rejection of claim 1 under 35 U.S.C. §103(a) as allegedly being obvious over Ofek in view of Kobayashi should be withdrawn.

Claims 2-6 depend from claim 1 and are allowable for at least the same reasons.

B. Claims 7-11

Claim 7 is directed to a method performed in a computer system including at least first and second backup storage systems to each back up information stored on at least one client, and at least one user interface coupled to the first and second backup storage systems. The method comprises receiving, at the at least one user interface, information related to backup activities of the first and second backup storage systems. As discussed above with reference to claim 1, the combination of Ofek and Kobayashi fails to disclose first and second backup storage systems and at least one user interface, as recited in claim 7. Thus, for the reasons set forth above, claim 7 patentably distinguishes over the prior art of record, and the rejection of claim 7 under 35 U.S.C. §103(a) should be withdrawn.

Claims 8-11 depend from claim 7 and are allowable for at least the same reasons.

C. Claims 12-16

Claim 12 recites a method performed in a computer system including at least one user interface and at least one backup storage system to store backup data from at least one client. The method comprises an act of receiving information related to backup activities of the at least one backup storage system at the at least one user interface over a path that is not dedicated to transporting information between the at least one backup storage system and the at least one user interface.

As discussed above, Ofek does not teach or suggest a user interface receiving information related to backup activities of at least one backup storage system. Accordingly, Ofek also fails to

disclose or suggest receiving the information over a path that is not dedicated to transporting information between the backup storage system and the user interface.

Rather, Ofek merely discloses a storage management application (SMAPP) which transmits backup commands to a primary storage element, which in turn transmits data and commands to a secondary or backup storage element. In col. 19, lines 17-26, Ofek describes a storage network controller, suitably programmed to perform the SMAPP functions, as being connected to a host, a primary storage element and a secondary storage element through a network. In col. 19, lines 29-34, Ofek discloses that once the storage network controller issues backup commands, the backup occurs transparently to the host: "the storage network controller 118A includes a management component and a server component. Thus, management of the hardware and media can be performed by the storage network controller 118A, independent of the host computer 110."

In connection with claim 12, the Office Action cites col. 14, lines 25-28 of Ofek, wherein Ofek states "the host computers 80 and the enterprise host domain 88 may be connected over a network. This network may include switching nodes 81, although any other form of network may be used." The cited passage does not disclose or suggest a user interface, or at least one backup storage system or backup activities, let alone a user interface receiving information related to backup activities of at least one backup storage system over a path not dedicated to transporting information between the at least one backup storage system and the user interface, as recited in claim 12. Thus, Ofek does not disclose or suggest the method of claim 12.

As discussed above, Kobayashi does not disclose or suggest backup storage systems, a user interface or backup activities. Thus, Kobayashi also fails to disclose or suggest the method of claim 12; in particular, like Ofek, nowhere does Kobayashi disclose or suggest a user interface receiving information related to backup activities of at least one backup storage system over a path not dedicated to transporting information between the at least one backup storage system and the user interface, as recited in claim 12.

In view of the foregoing, the combination of Ofek and Kobayashi fails to disclose or suggests the computer system recited in claim 12. Accordingly, claim 12 patentably distinguishes over the combination of Ofek and Kobayashi, and is in condition for allowance.

Therefore, the rejection of claim 12 under 35 U.S.C. §103(a) as allegedly being obvious over Ofek in view of Kobayashi should be withdrawn.

Claims 13-16 depend from claim 12 and are allowable for at least the same reasons.

D. Claims 17-21

Claim 17 is directed to a user interface for use in a computer system having at least one backup storage system, the at least one backup storage system to store backup data from at least one client. The user interface comprises at least one controller, to be coupled to the at least one backup storage system, to receive information related to backup activities of the at least one backup storage system over a path that is not dedicated to transporting information between the at least one backup storage system and the user interface. For reasons similar to those discussed above with respect to claim 12, claim 17 patentably distinguishes over the prior art of record, and the rejection of claim 17 under 35 U.S.C. §103(a) should be withdrawn.

Claims 18-21 depend from claim 17 and are allowable for at least the same reasons.

E. Claims 22-25

Claim 22 recites a computer readable medium encoded with a program for execution on a computer system including at least one user interface and at least one backup storage system to store backup data from at least one client. When executed on a computer system, the program performs the method of claim 12. Therefore, for the reasons set forth above with respect to claim 12, claim 22 patentably distinguishes over the prior art of record, and the rejection of claim 22 under 35 U.S.C. §103(a) should be withdrawn.

Claims 23-25 depend from claim 22 and are allowable for at least the same reasons.

F. Claims 26-29

Applicants note that the Office Action grouped the rejection of claim 26 with the rejection of claims 1 and 7, citing the limitations of claims 1 and 7 in rejecting claim 26. However, claim 26 recites different limitations than those recited in claims 1 and 7. Thus, the Office Action fails to address all the limitations of claim 26. Accordingly, Applicants

respectfully submit that the rejection of claim 26 under 35 U.S.C. §103(a) is improper and should be withdrawn.

Claim 26 recites a method performed in a computer system having at least first and second backup storage systems to each store backup data from at least one client. The method comprises an act of receiving information related to backup activities of the second backup storage system at the first backup storage system.

Ofek does not disclose or suggest first and second backup storage systems to each store backup data from at least one client. As discussed above with reference to claim 1, Ofek merely discloses a primary storage element and **only a single** secondary or backup storage element associated with a tape library. Accordingly, Ofek does not disclose or suggest data transfer between multiple backup storage systems because only one backup storage system is disclosed in Ofek. Thus, Ofek does not disclose receiving information related to backup activities of a second backup storage system at a first backup storage system, as recited in claim 26.

As discussed above, Kobayashi does not disclose backup storage systems, let alone a first backup storage system receiving information related to the backup activities of a second backup storage system. Thus, like Ofek, Kobayashi does not disclose receiving information related to backup activities of a second backup storage system at a first backup storage system, as recited in claim 26.

In view of the foregoing, the combination of Ofek and Kobayashi fails to disclose or suggest the method recited in claim 26. Accordingly, claim 26 patentably distinguishes over the combination of Ofek and Kobayashi, and is in condition for allowance. Therefore, the rejection of claim 26 under 35 U.S.C. §103(a) as allegedly being obvious over Ofek in view of Kobayashi should be withdrawn.

Claims 27-29 depend from claim 26 and are allowable for at least the same reasons.

G. Claims 30-36

Applicants note that claim 30 was rejected under 35 U.S.C. §103(a) as being obvious over Ofek in view of Kobayashi, yet only the teachings of Ofek were cited in the Office Action in relation to claim 30. Thus, Applicants respectfully submit that the rejection of claim 30 under 35 U.S.C. §103(a) is improper and should be withdrawn.

Claim 30 recites a first backup storage system to store backup data from at least one first client, wherein the first backup storage system is used in a computer system having a second backup storage system to store backup data from at least one second client. The first backup storage system comprises a first controller coupled to the second backup storage system to receive information related to backup activities of the second backup storage system.

As discussed above with reference to claim 26, Ofek discloses only one secondary or backup storage element, but does not disclose first and second backup storage systems which each store backup data from at least one client, as recited in claim 30. Thus, Ofek does not disclose or suggest the system of claim 30.

Also as discussed above, Kobayashi does not disclose backup storage systems. Thus, Kobayashi does not disclose or suggest the system of claim 30.

In view of the foregoing, the combination of Ofek and Kobayashi fails to disclose or suggest the backup storage system recited in claim 30. Accordingly, claim 30 patentably distinguishes over the combination of Ofek and Kobayashi and is in condition for allowance. Therefore, the rejection of claim 30 under 35 U.S.C. §103(a) as allegedly being obvious over Ofek in view of Kobayashi should be withdrawn.

Claims 31-36 depend from claim 30 and are allowable for at least the same reasons.

H. Claims 37-39

Applicants note that the Office Action grouped the rejection of claim 37 with the rejection of claims 1 and 7, citing the limitations of claims 1 and 7 in rejecting claim 37. However, claim 37 recites different limitations than those recited in claims 1 and 7. Thus, the Office Action fails to address all the limitations of claim 37. Accordingly, Applicants respectfully submit that the rejection of claim 37 under 35 U.S.C. §103(a) is improper and should be withdrawn.

Claim 37 is directed to a computer readable medium encoded with a program for execution on a computer system that includes first and second backup storage systems coupled together, the first and second backup storage systems each storing backup data from at least one client. When executed, the program performs a method substantially similar to the method of claim 26. Therefore, for the reasons set forth above with respect to claim 26, claim 37 patentably

distinguishes over the combination of Ofek and Kobayashi, and the rejection of claim 37 under 35 U.S.C. §103(a) should be withdrawn.

Claims 38 and 39 depend from claim 37 and are allowable for at least the same reasons.

I. Claims 40-43

Claim 40 is directed to a method performed in a computer system having at least one user interface and at least one backup storage system to store backup data from at least one client. The method comprises transmitting information related to backup activities of the at least one backup storage system to the at least one user interface over a path that is not dedicated to transporting information between the at least one backup storage system and the at least one user interface. For reasons similar to those set forth with respect to claim 12, claim 40 patentably distinguishes over the combination of Ofek and Kobayashi, and the rejection of claim 40 under 35 U.S.C. §103(a) should be withdrawn.

Claims 41-43 depend from claim 40 and are allowable for at least the same reasons.

J. Claims 44-48

Claim 44 is directed to a first backup storage system to store backup data from at least one client, the first backup storage system for use in a computer system having at least one user interface. The first backup storage system comprises at least one controller to transmit information related to backup activities of the first backup storage system to the at least one user interface over a path that is not dedicated to transporting information between the first backup storage system and the at least one user interface. For reasons similar to those set forth with respect to claim 40, claim 44 patentably distinguishes over the combination of Ofek and Kobayashi, and the rejection of claim 44 under 35 U.S.C. §103(a) should be withdrawn.

Claims 45-48 depend from claim 44 and are allowable for at least the same reasons.

K. Claims 49-52

Claim 49 recites a computer readable medium encoded with a program for execution on a computer system that includes at least one user interface and at least one backup storage system to store data from at least one client. The program, when executed, performs the method of claim

40. Therefore, for the reasons set forth above with respect to claim 40, claim 49 patentably distinguishes over the combination of Ofek and Kobayashi, and the rejection of claim 49 under 35 U.S.C. §103(a) should be withdrawn.

Claims 50-52 depend from claim 49 and are allowable for at least the same reasons.

L. Claims 53-55

Applicants note that the Office Action grouped the rejection of claim 53 with the rejection of claim 56, citing the limitations of claim 56 in rejecting claim 53. However, claim 53 recites different limitations than those recited in claim 56. Thus, the Office Action fails to address all the limitations of claim 53. Accordingly, Applicants respectfully submit that the rejection of claim 53 under 35 U.S.C. §103(a) is improper and should be withdrawn.

Claim 53 is directed to a method performed in a computer system having at least one backup storage system to store backup data from at least one client. The method comprises determining an occurrence of an event at which a report of information related to backup activities of the at least one backup storage system is to be generated, and automatically generating the report when it is determined that the event has occurred.

Ofek does not disclose or suggest any type of report of information related to backup activities, and certainly does not disclose such a report being automatically generated upon determining that an event has occurred. The Office Action asserts that Ofek discloses providing the status of only a most recent backup of a work item in stating that “only a subset of the physical elements in the primary storage node may need to be copied” (col. 16, lines 58-59). Applicants are unclear as to the significance or relevance of this text in relation to claim 53. In the cited passage, Ofek discloses executing a backup of only a subset of work items, but does not disclose how that subset is defined. Ofek fails to disclose or suggest determining an occurrence of an event at which a report of information related to backup activities of the at least one backup storage system is to be generated, let alone automatically generating a report when it is determined that the event has occurred. Thus, Ofek does not disclose or suggest the method of claim 53.

As discussed above, Kobayashi does not disclose or suggest backup storage systems or reports. Thus, Kobayashi does not disclose or suggest the method of claim 53; specifically, like

Ofek, Kobayashi fails to disclose or suggest determining an occurrence of an event at which a report of information related to backup activities of the at least one backup storage system is to be generated, and automatically generating a report when it is determined that the event has occurred.

In view of the foregoing, the combination of Ofek and Kobayashi fails to disclose or suggest the method recited in claim 53. Accordingly, claim 53 patentably distinguishes over the combination of Ofek and Kobayashi, and is in condition for allowance. Therefore, the rejection of claim 53 under 35 U.S.C. §103(a) as allegedly being obvious over Ofek in view of Kobayashi should be withdrawn.

Claims 54 and 55 depend from claim 53 and are allowable for at least the same reasons.

M. Claim 56

Claim 56 recites a method of providing information related to backup activities of at least one backup storage system, performed in a computer system having the at least one backup storage system to store backup data from at least one client. The backup activities include the backup of at least one work item associated with the at least one client. The method comprises an act of, when the at least one work item is backed up more than once in a given time period by the at least one backup storage system, providing only the status of a most recent backup of the at least one work item.

Ofek does not disclose or suggest providing a status of backup activities, and certainly does not suggest providing the status of only a most recent backup of a work item. As discussed above with reference to claim 53, the Office Action asserts that Ofek discloses providing the status of only a most recent backup of a work item in stating that “only a subset of the physical elements in the primary storage node may need to be copied” (col. 16, lines 58-59). Again, Applicants are unclear as to the significance or relevance of this text in relation to claim 56. In the cited passage, Ofek discloses executing a backup of only a subset of work items, but does not disclose how that subset is defined. Ofek neither discloses nor suggests providing status information, let alone providing a status of only a most recent backup when a work item is backed up more than once in a given time period. Ofek also does not disclose a method of

providing information related to the backup activities of the at least one backup storage system. Thus, Ofek does not disclose the method of claim 56.

As discussed above, Kobayashi does not disclose or suggest backup storage systems or reporting. Thus, Kobayashi does not disclose or suggest the method of claim 56; specifically, like Ofek, Kobayashi fails to disclose or suggest providing status information of only a most recent backup when a work item is backed up more than once in a given time period.

In view of the foregoing, the combination of Ofek and Kobayashi fails to disclose or suggest the method recited in claim 56. Accordingly, claim 56 patentably distinguishes over the combination of Ofek and Kobayashi and is in condition for allowance. Therefore, the rejection of claim 56 under 35 U.S.C. §103(a) as allegedly being obvious over Ofek in view of Kobayashi should be withdrawn.

Because the combination of cited references fails to disclose or suggest all of the features recited in each of Applicants' independent claims, Applicants believe that it is unnecessary at this time, for the sake of brevity, to argue that the combination of the cited references is improper. However, Applicants do believe that the combination is improper, for there is no teaching or suggestion to motivate one of ordinary skill in the art to combine the references. Accordingly, Applicants reserve the right to specifically address the improper combination of the cited references in the future, if Applicants deem it necessary. Regardless, as discussed above, even if the combination of references were proper, Applicants' claims distinguish over the combination.